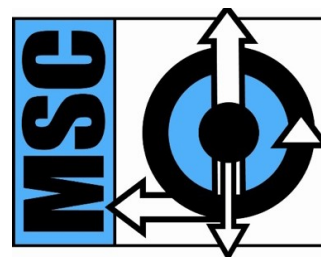


## Messerschmidt Safety Consultants

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Mrs. Kathryn Breard Platt  
Galloway Law Firm  
2510 14th Street, Suite 910  
Gulfport, Mississippi 39501

5 January 2018

*Re: Williams vs D&D Express*

Dear Mrs. Platt:

The following report summarizes my investigation into and analysis of the 24 April 2016 motor vehicle crash involving a 1995 Buick Roadmaster and 2008 Freightliner Cascadia. The 1995 Buick Roadmaster was being operated at the time of the accident by Mr. Daryl Williams. Mr. Lamario Henderson, Larry Henderson, and Jametrius McCon were riding as Mr. Williams' passengers at the time of the crash. The 2008 Freightliner was being operated by Mr. Adolfo Perez at the time of the crash. Mr. Carlos Laguna was riding as Mr. Perez's passenger at the time of the crash.

This report should be considered preliminary due to the ongoing nature of the legal process, and I expect to supplement my findings if additional evidence and testimony becomes available. All opinions expressed herein are made to a reasonable degree of scientific probability in the field of accident reconstruction and my area of expertise.

### **Collision Investigation**

We were retained to perform a download of the 2008 Freightliner to preserve any and all data from the Engine Control Module (ECM). We completed this inspection on 15 June 2016, and have performed the following additional work as part of our investigation:

- On 17 October 2017, the 1995 Buick Roadmaster was inspected, photographed, and measured.
- On 7 December 2017, the Sensing and Diagnostic module (SDM) from the Buick was downloaded.
- On 7 December 2017, the collision site was inspected, photographed, videos of the area were made, and the roadway was mapped.

In addition to these tasks, we have reviewed the following data and documents:

- The Mississippi Uniform Crash Report, Mississippi Highway Patrol #9030-080424160001 completed by Trooper Joshua LaCap;
- 23 color photographs taken by Trooper LaCap;
- Google Earth Pro satellite images of the area where the crash occurred,

- Vehicle specifications for the 1995 Buick Roadmaster from the US National Highway Traffic Safety Administration (NHTSA), Expert Autostats, and several other sources, such as publically available Vehicle Identification Number (VIN) data;
- Specifications for the 2008 Freightliner Cascadia;
- Weather data from the day of and day before the crash from Wunderground, an internet weather data repository;
- Sun position data from the US Naval Observatory Astronomical Applications Department (USNO AAD);
- HVEDR download from the 2008 Freightliner ECM;
- CDR download from the 1995 Buick airbag module;
- Jametrius McCon Complaint;
- D&D Express Transport Corp's Answer and Defenses to the Complaint and Third Party Complaint Against Daryl D. Williams;
- Daryl William's Response to Defendant Adolfo Perez's First Set of Interrogatories and Requests for Production of Documents;
- Daryl William's Response to Defendant D&D Express Transport Corp's First Set of Interrogatories and Requests for Production of Documents;
- Plaintiff Jametrius McCon's First Supplemental Responses to Defendant D&D Express Transport Corp Requests for Production of Documents;
- Plaintiff Jametrius McCon's First Supplemental Responses to Defendant D&D Express Transport Corp's Interrogatories
- Plaintiff Jametrius McCon's First Supplemental Responses to Defendant Adolfo Perez Requests for Production of Documents;
- Plaintiff Jametrius McCon's First Supplemental Responses to Defendant Adolfo Perez Interrogatories;
- Plaintiff Jametrius McCon's Responses to Defendant, Adolfo Perez Interrogatories;
- Plaintiff Jametrius McCon's Responses to Defendant, D&D Express Transport Corp Interrogatories;
- D&D Express Transport Corp Responses to the Requests for Production Propounded by Plaintiff, Jametrius McCon;
- D&D Express Transport Corp Responses to the Interrogatories Propounded by Plaintiff, Jametrius McCon;
- Adolfo Perez's Responses to the Requests for Production Propounded by Plaintiff, Jametrius McCon;
- Adolfo Perez's Responses to the Interrogatories Propounded by Plaintiff, Jametrius McCon;
- Deposition of Adolfo Perez;
- Deposition of Isumi Duran;
- Deposition of Carlos Laguna;

- Deposition of Trooper Joshua LaCap;
- Plaintiff's expert reports and disclosures.

### Collision Description

According to the crash report, the collision occurred just prior to 4:30am. At that time, the weather was clear and roadway was dry. In the area of the collision, Interstate 10 (I-10) is straight, with two lanes for eastbound and two lanes for westbound travel, separated by a bridge.

At the time of the crash, Mr. Williams was driving a 1995 Buick Roadmaster and Mr. Perez was operating a 2008 Freightliner tractor with a box trailer. According to the crash report, Mr. Williams was driving with a suspended license at the time of the accident. Trooper LaCap confirmed in his deposition that he ran Mr. Williams' license and it was suspended.

Prior to the collision, both vehicles were traveling eastbound on I-10 in Jackson County, Mississippi. In this area, the posted speed limit on I-10 is 70 miles per hour.

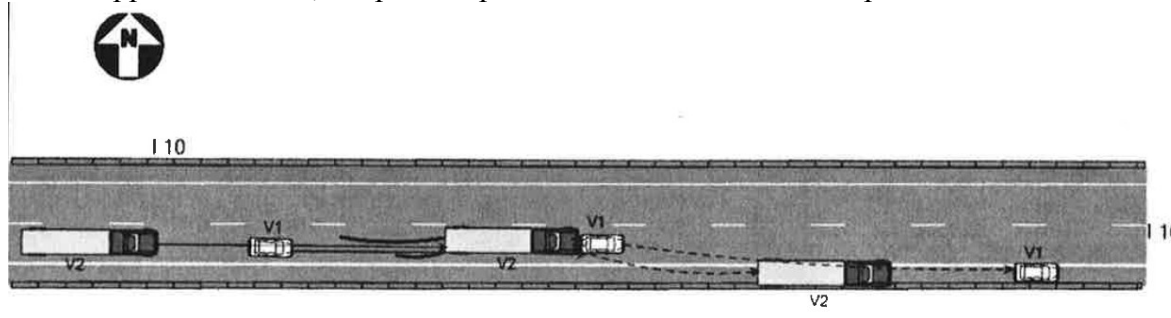


Figure 1: Diagram from Mississippi Uniform Crash Report

According to the crash report, the 1995 Buick was traveling in the right, outside lane. Mr. Williams indicated he ran out of gas and the vehicle came to an abrupt stop. The 2008 Freightliner was also traveling in the right, outside lane.

The collision occurred when Mr. Perez's 2008 Freightliner overtook Mr. Williams much slower-moving 1995 Buick and struck the rear offset slightly to the driver's side. After impact, both vehicles came to final rest in the eastbound emergency shoulder, facing east.

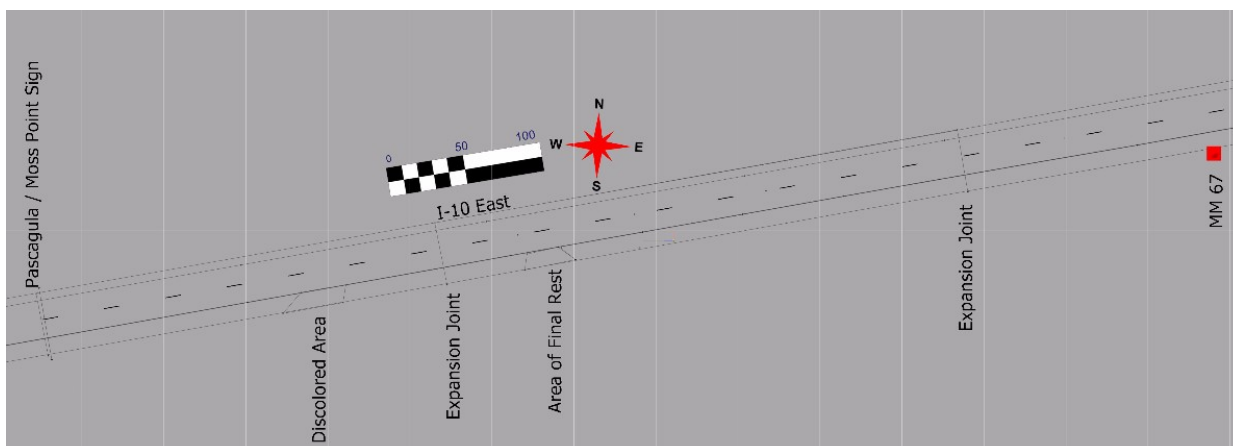
This collision occurred near mile marker 66 of I-10 in the eastbound outside travel lane.

### Crash Site Inspection

In the area where the crash occurred, I-10 is a 4-lane highway traveling east and west with traffic separated by two 2-lane bridges. Lanes are separated by standard white stripes and standard white fog lines mark the outer edges of the roadway. Travel lanes are approximately 12 feet wide. The speed limit was posted at 70 mph in the area of the crash. Roadway conditions according to the crash report and weather data indicate a dry roadway with clear weather conditions. The section of roadway in the area of the crash is unlit.

The crash site was located using the GPS coordinates on the Mississippi Uniform Crash Report and photographs taken by Trooper LaCap. There was no roadway evidence visible from this crash at the time of our inspection.

The location of final rest for the 2008 Freightliner was located using GPS coordinates and matching roadway markings found in trooper photographs with physical markings seen at the crash site.



**Figure 2: Diagram showing potential 2008 Freightliner final rest.**

### 1995 Buick Inspection

On 17 October 2017, the 1995 Buick Roadmaster was inspected and photographed along with a lamp examination with Mr. Gary Johnson. It is a 4 door sedan with VIN 1G4BN52P2SR405417 and Mississippi license plate JHC689. The vehicle did not have any repairs completed between the time of the accident and time of inspection.



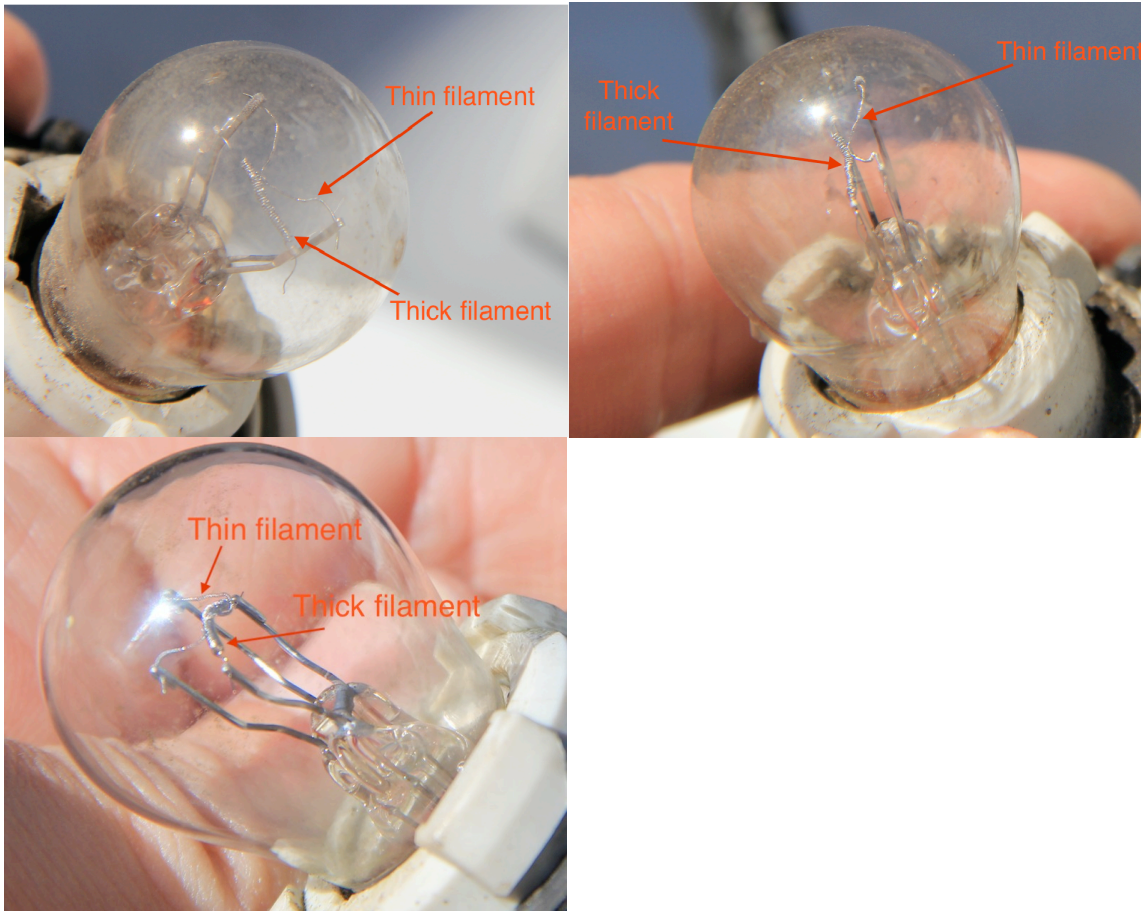
**Photograph: 1995 Buick Roadmaster**

An inspection of the Buick's remaining taillight bulbs was conducted by Mr. Johnson and Mr. Messerschmidt. There are two types of tail lamp bulbs utilized in the Buick. One type is a single filament bulb used for tail lights. The other type is a dual filament bulb used for turn signals, brake lights, and hazard lights.

The single filament bulbs that were inspected showed signs of "hot shock", which indicates the filament was incandescent or illuminated at the time of impact and the tail lights were on.

The dual filament bulbs that were inspected contain a thin wire and thick wire. The thin wire has a higher resistance to draw less current and give off less light, this wire is typically used for parking and tail lights. The thin wire filaments inspected did show signs of "hot shock" which again indicate they were incandescent at the time of impact and the tail lights were on. The thick

wire has a lower resistance to draw more current and give off more light, this wire is typically used for turn signals, brake lights, and hazard lights. The thick wire filaments inspected did not show the same clear indication of “hot shock”, instead they showed signs of bowing. Because both filaments are not equally deformed potentially indicates the thick wire filament was not incandescent at the time of impact and was hot because of it’s proximity to the incandescent filament. There is not enough evidence at this time to determine the status of the hazard lights at the time of impact. (Baker) Therefore, one cannot state to a reasonable degree of scientific probability that the hazard lights were on or not on at the time of the collision.



**Excerpts: Taillight bulb inspection**

The vehicle sustained damage to the rear, including damage to the rear bumper, trunk, and driver/passenger side quarter panels. Crush measurements were taken at the inspection to determine approximate closing speed. Based on these measurements, the Freightliner was offset to the driver’s side slightly.



**Photograph: Crush damage**

On 7 December 2017, the Sensing and Diagnostic module (SDM) from the Buick was imaged through the DLC connector. The module contained no crash related data but was capable of recording 300ms of longitudinal delta v. The airbags did not deploy at the time of the crash.

### **2008 Freightliner Inspection/ECM Download**

On 15 June 2016, the 2008 Freightliner Cascadia was downloaded and photographed. The VIN was documented as 1FUJGLCK38LY72335 at this time with Florida tag F1766U. The tractor and trailer were both documented as D&D express with tractor number 515. At the time of this inspection, the majority of the damage to the tractor had been repaired, as the tractor had been put back in service. The front grille appeared to be the same as at the time of the accident. The ECM download was the only activity conducted, no other inspection of the tractor or trailer was done at this time.



**Photograph: 2008 Freightliner at time of accident**



**Photograph: 2008 Freightliner at time of download**

The 2008 Freightliner was equipped with a Detroit Diesel series 60 engine and DDEC VI ECM. This ECM potentially records the last 2 Hard Brake events when wheel speed exceeds a set parameter of 7 miles per hour per second. A Hard Brake event consists of 59 seconds of data prior to a change in wheel speed greater than the programmed parameter. This data includes speed, brake applications, engine RPM, engine load, cruise control, etc. The ECM will also record a Last Stop event when the wheel speed reaches 0 miles per hour. This type of event records the same data as a Hard Brake event but 1 minute 44 seconds is recorded instead of 59 seconds.

#### **ECM Download**

On 15 June 2016 at approximately 7:45am, the 2008 Freightliner Cascadia was photographed and downloaded.

The engine serial number for this tractor was documented as 06R0985090. The DDEC VI ECM consists of two independent electronic control modules, Common Powertrain Controller (CPC) serial number 09.0048.00035 and Motor Control Module (MCM) serial number A6930001. ECM odometer showed total trip distance 888546.2 miles. The ECM had a slow clock drift of approximately 2 hours. The ECM at the time of download had the governed maximum road speed parameter set at 75.06 miles per hour and the maximum governed cruise speed set at 73.07 miles per hour. This would have made it difficult for the Freightliner to reach speeds higher than the set parameters on a flat stretch of roadway such as the section of I-10 where the accident occurred.

Total Distance	888546.2 mi
Total Time	22126:12:58
Total Fuel	141905.30 gal
Overall Fuel Economy	6.26 mpg
Avg Vehicle Speed	40.16 mph

**Page 12 of Data Imaging Report**

The ECM records monthly activity data for the last three months of driving. The April, May, and June months were all recorded. The average vehicle speed and Hard Brake count for each month is recorded as follows:

Month	Average Vehicle Speed	Hard Brake Count
April	57.3 mph	2
May	56.2 mph	3
June	62.6 mph	0

The monthly activity for April can be further broken down as percentage of driving time under 66 miles per hour, between 66-71 miles per hour and over 71 miles per hour.

Vehicle Speed	Driving Time (Percentage)
Under 66 mph	53.94 %
66-71 mph	21.48 %
Over 71 mph	24.58 %

Daily Engine Usage data was recorded for the dates ranging from 05/04/2016 to 06/15/2016. The Daily Engine Usage data from the month of May is consistent with the Monthly Activity in regard to average vehicle speed.

Date:	5/4/2016	Date:	5/5/2016	Date:	5/6/2016
Start Time:	00:00:00 EST	Start Time:	00:00:00 EST	Start Time:	00:00:00 EST
Odometer:	879203.70 mi	Odometer:	880370.60 mi	Odometer:	881335.20 mi
Distance:	1166.90 mi	Distance:	964.60 mi	Distance:	1187.40 mi
Fuel:	238.00 gal	Fuel:	190.00 gal	Fuel:	210.00 gal
Fuel Economy:	4.90 mpg	Fuel Economy:	5.08 mpg	Fuel Economy:	5.65 mpg
Average Speed:	55.22 mph	Average Speed:	58.28 mph	Average Speed:	59.97 mph

Excerpts from Daily Engine Usage (May 2016, page 32)

### Calculations

According to Mississippi Highway Patrol photographs and testimony from Trooper LaCap, there were skid marks left by the Freightliner approximately the length of the tractor-trailer combination but no measurements were taken. Assuming the tractor-trailer measured approximately 70 feet long, the skid marks at the time of the accident would be similar. If the Freightliner was travelling between 60-65 miles per hour (88-95.3 feet per second) as stated in Mr. Perez's deposition, the Freightliner would have begun braking 0.73-0.79 seconds before impact. Using a tire/roadway coefficient of friction of 0.4 would have slowed the Freightliner down to approximately 52-58 miles per hour at impact.

The closing speed at impact between the two vehicles was estimated by using crush stiffness coefficients and crush measurements applicable to the 1995 Buick Roadmaster. The coefficients were applied to the measurements of the approximate width and depth of the damage compared to published vehicle dimensions.

Based on the analysis of the damage, the closing speed at impact was calculated to be approximately 45 miles per hour. (Robinson) (Tumbas & Smith) If the Freightliner was travelling between 52-58 miles per hour, that would put the Buick's speed at impact between 7-13 miles per hour. This is inconsistent with Mr. Williams response to interrogatories that they were travelling approximately 58 miles per hour moments before impact. This is also consistent with McCon's medical records where he stated they were traveling no more than 10 miles per hour.

Assuming Mr. Williams vehicle was travelling approximately 58 miles per hour when he experienced some type of mechanical failure. Using a tire/roadway coefficient of friction of 0.05, it would have taken Mr. Williams approximately 46-41 seconds or 2216-2136 feet of rolling to reach the calculated impact speed of 7-13 miles per hour. It would have taken Mr. Williams approximately 52 seconds or 2,249 feet to come to a complete stop. This would have allowed a sufficient amount of time and distance for Mr. Williams to find a safe place to pull the Buick onto the shoulder of I-10.

According to the accident report, the accident occurred around mile marker 66 of I-10, at this point Mr. Williams would have still been approximately 10,326 feet or 1.96 miles from the nearest exit. This is inconsistent with Mr. Williams response to interrogatories that they were coming up on their exit and would have needed to slow down to take it. Based on the information, data, documents, and interrogatory responses, Mr. Williams would not have been able to reach his exit given the amount of distance away and the high-rise portion of the bridge he would have to overcome.

## Conclusions

1. The Freightliner was traveling 60-65 miles per hour, assuming the speed as testified by Mr. Perez.
2. The Buick's tail lights were on at the time of impact. There is not enough evidence to determine the status of the hazard lights at the time of impact. Therefore, one cannot state to a reasonable degree of scientific probability that the hazard lights were on or not on at the time of the collision.
3. The Buick was traveling 7-13 miles per hour at the time of impact.
4. Assuming the Buick was traveling 58 miles per hour when some type of mechanical failure caused the vehicle to lose power, as testified by Mr. Williams in his response to interrogatories, the Buick could have rolled a distance of approximately 2249 feet or 52 seconds before coming to a complete stop, which is a sufficient amount of time and distance to safely pull the Buick onto the shoulder of I-10.
5. According to the accident report, the area of impact was approximately 10,326 feet or 1.96 miles from the nearest exit. Mr. Williams could not have made it to his exit off the bridge.

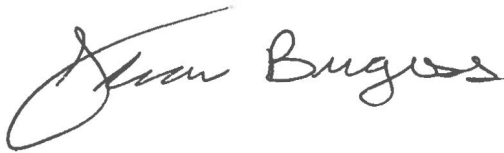
This report is based on the data and documents specifically referenced, and we recognize that the legal discovery process is ongoing. All of the opinions expressed, however, are expressed to a reasonable degree of professional and scientific certainty based on the evidence referred to above.

We reserve the right to supplement our findings if new, relevant evidence becomes available.

My opinions are based on my training, education, and experience in Accident Reconstruction, the work performed and the documents that are referred to above. Please contact us if you need further analysis of the conclusions discussed above.

References cited in this report, fee schedule, and my current CV are attached as appendices to this report. I have no list of testimony for the past four years.

Sincerely,

A handwritten signature in black ink that reads "Shanon Burgess". The signature is written in a cursive style with a large, looping initial "S".

Shanon Burgess